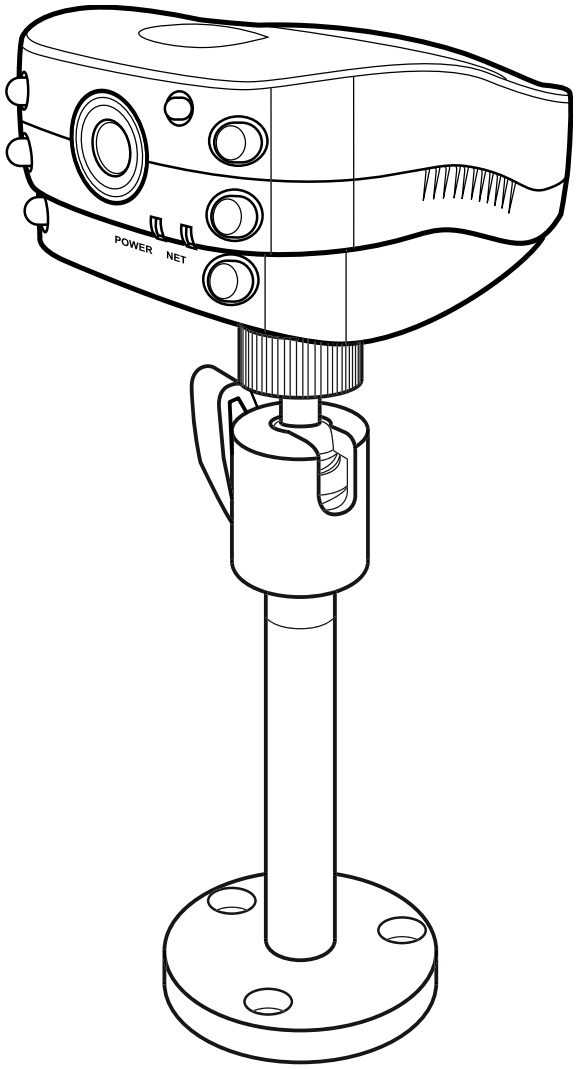
Network / IP Camera



User Manual

Preface

Congratulations on your purchase of this product. Read this manual carefully and keep it in a safe place for future reference.

About this manual

This user manual has been designed to help you make the most of your IP camera and its many features and functions. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice.

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Table of Contents

Introduction

Key features 1
Package contents 2
Product views 3
Indicators 4
System requirements 4

Getting Started

Software installation 5
Hardware installation 5
Assembling the stand 5
Connecting to a network 6
Connecting power 6
Enabling Active X 7
Initial configuration 8
Using an internet browser to connect to the IP camera 9

Using and Configuring

Web page layout 10
Configuring the camera 11
Configuring the image 11
Setting up users and administrators 12
Configuring network settings 13
Alert 15
Advanced 16
Home 17
The side menu bar 17
Right click control 18
Image 18
Record 18
Zoom 18
Motion detection 18

Appendix

Specifications 19
Maintenance 20
Glossary 21

Introduction

This section covers unpacking your new IP camera, its key features, and basic technical information about the product. Refer to later chapters for information on setting up and configuring the product in more detail.

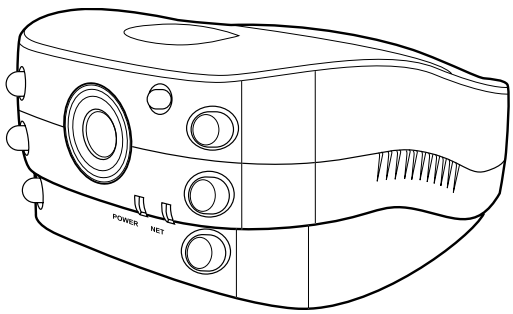
Key features

- 640x480 (VGA), 320x240 (CIF), 160x120 (QCIF) resolutions
- 307, 200 effective pixels
- Max frame rate 12 fps at VGA resolution
- 6 mm, F1.8 lens
- Configuration and viewing via standard internet browser
- Built-in microphone
- Motion detection feature
- E-mail and ftp alert features
- Automatic infrared night vision function
- External DI sensor input

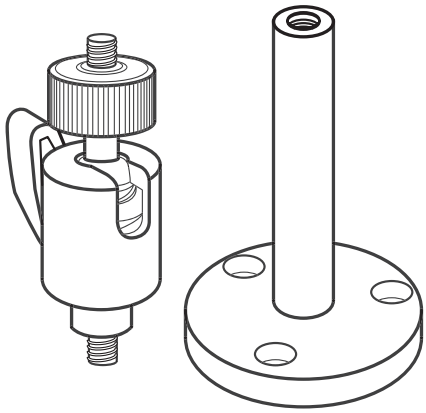
Package contents

The package should contain all the following. If anything is missing or appears damaged, contact your dealer immediately.

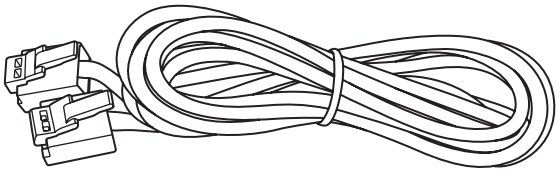
IP camera module



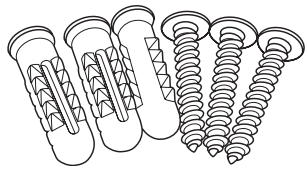
Mounting bracket



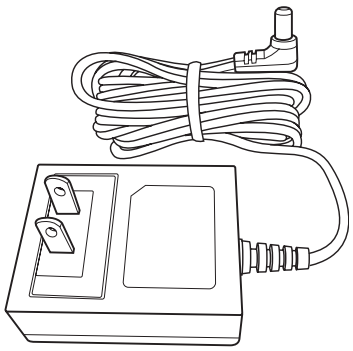
RJ-45 cable



Mounting screws

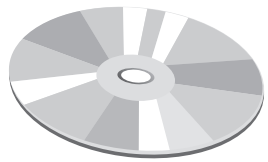


AC power adaptor



Quick start guide

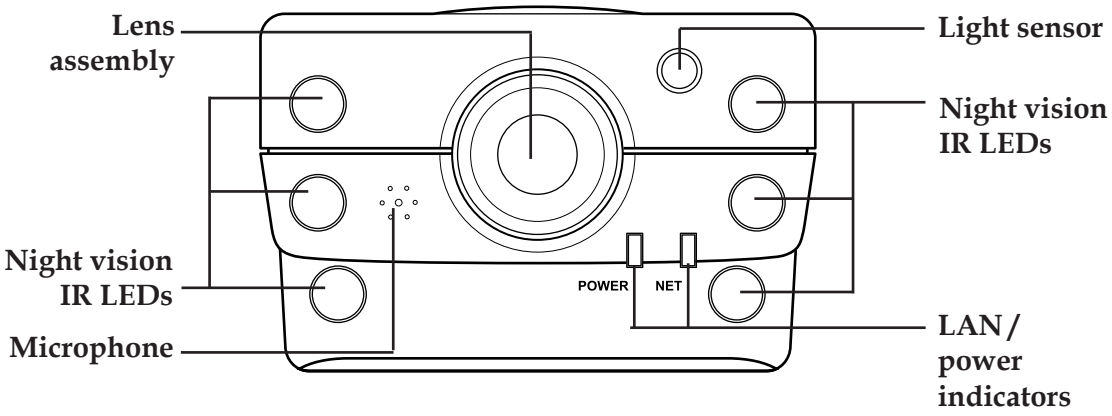
CD-ROM with manual and software



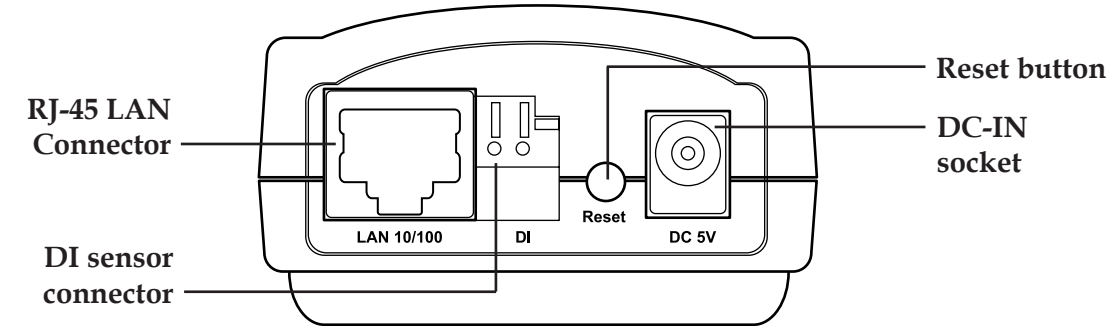
Product views

Use the following illustrations to familiarize yourself with the camera and identify each of the parts.

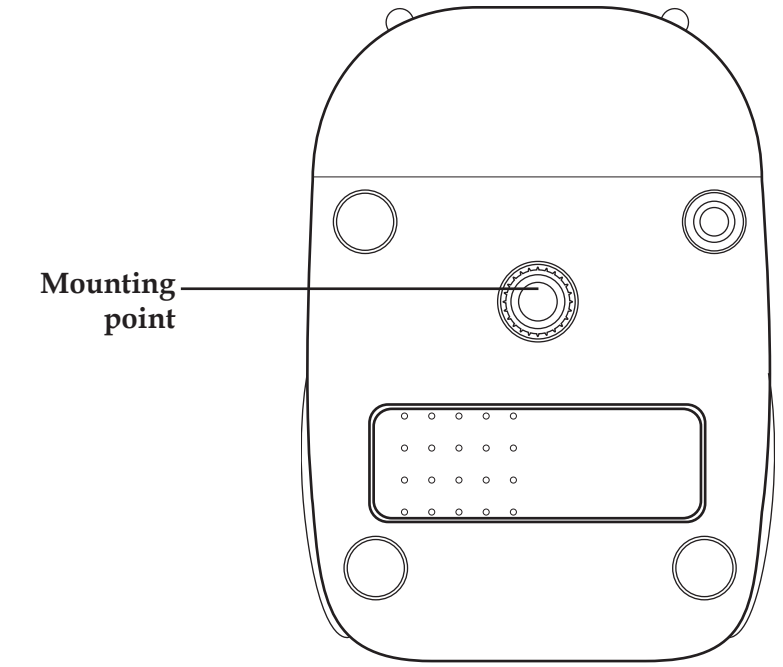
Front View



Back View



Bottom View



Indicators

The following table shows what each of the LED indicators means.

LED	Color	Description
LAN	green	network activity indicator
Power	green	power indicator

System requirements

The system requires an Ethernet port and an IP address.

To view the IP camera images, each computer requires:

- Microsoft Windows 98, ME, NT4.0, 2000, or XP. Mac or Linux based machine.
- Microsoft Internet Explorer 5.x, or later.

Getting Started

Read this section of the manual to learn how to set up your IP camera and use its basic functions.

Software installation

You do not need to install any software for simply viewing images from the IP camera, but you will need to use the supplied **auto scan** software to set the camera up for the first time and find it on the network.

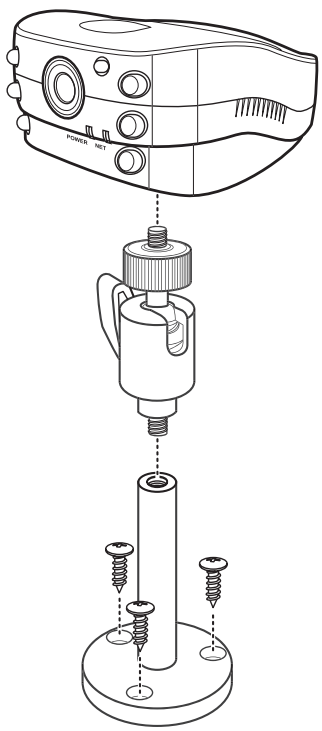
To install the **auto scan** software:

1. Insert the supplied CD-ROM into your CD-ROM drive.
2. If the installation does not start automatically, use a file explorer application to execute the **setup.exe** file in the root folder on the CD-ROM.
3. Follow the on-screen instructions.

Hardware installation

Read this section to learn how to install the camera and connect to a network

Assembling the stand



Assemble the stand and fix it to the camera as shown.

Use the three screws and plugs provided to fix the stand bracket to a wall, or other convenient fixing point.

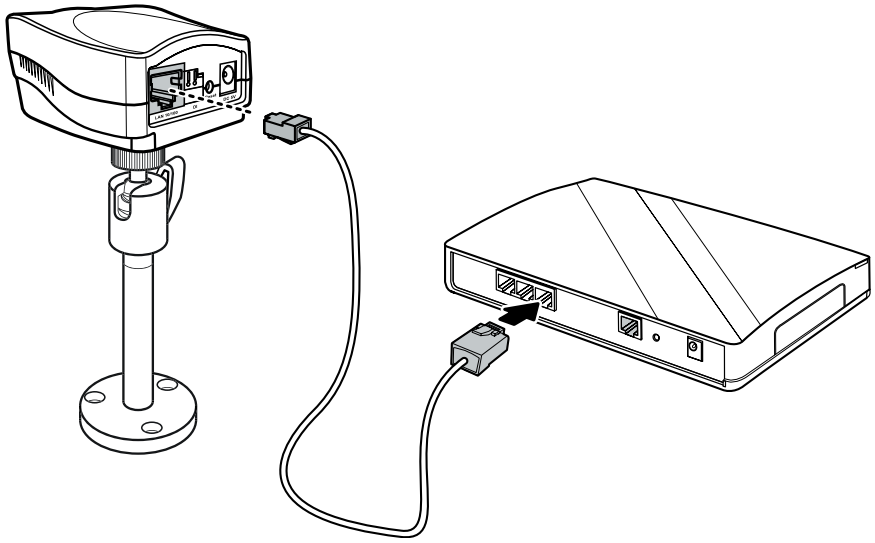
The stand can be adjusted to allow the camera a full 360º of rotation and a pan and tilt action .

Warning

The camera is not waterproof and should not be mounted outside or in a position where it could become wet.

Connecting to a network

The IP camera can be connected to an Ethernet network, using the RJ-45 port, as shown. Connect the camera to an Ethernet hub or switch using a standard cable. You can also connect a computer directly to the camera using the supplied cross-over cable.

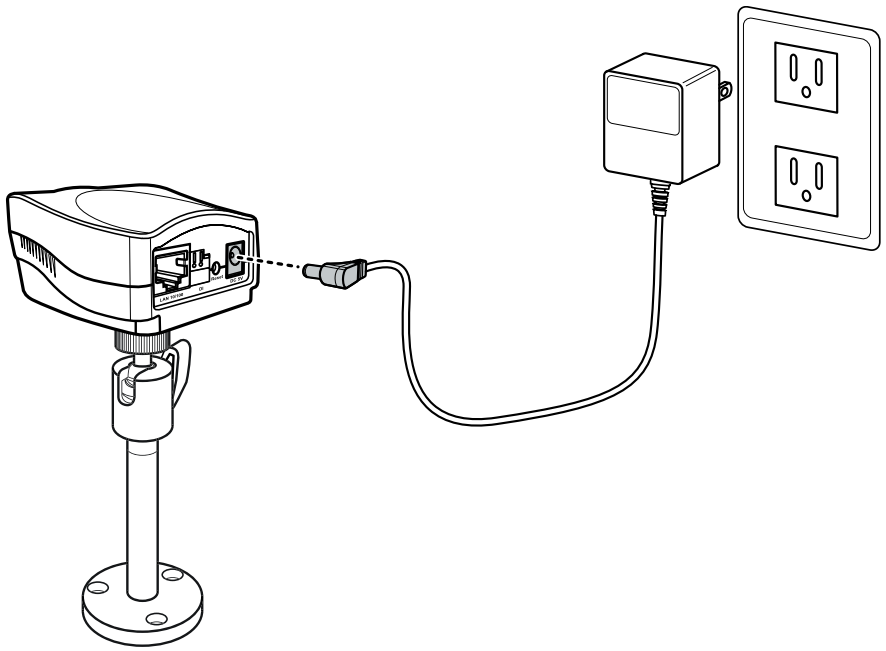


Connecting power

Connect power to the IP camera as shown.

Warning

Use only the power adapter supplied with the camera. Using another adapter, not recommended by the manufacturer, may damage the camera and invalidate the warranty.

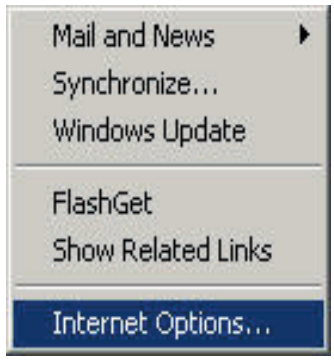


Enabling Active X

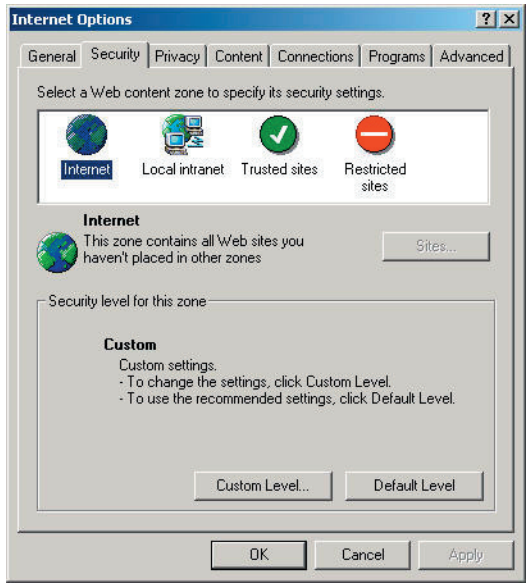
Your browser must have Active X enabled to connect to the IP camera.

To enable Active X in your browser:

1. Open your internet browser.
2. Click on the tools menu at the top of the screen and select **Internet Options...**



3. Select the security tab from the internet options menu.



4. Click the Custom Level... button and enable all the Active X features in the list using the radio buttons.

Initial configuration

Read this section to learn how to configure and begin using the IP camera. A complete description of the features and functions can be found in the next chapter.

To install the camera on a network, you first need to give it an IP address. See your network administrator to obtain an IP address suitable for your network, along with a netmask, the gateway address, and HTML port.

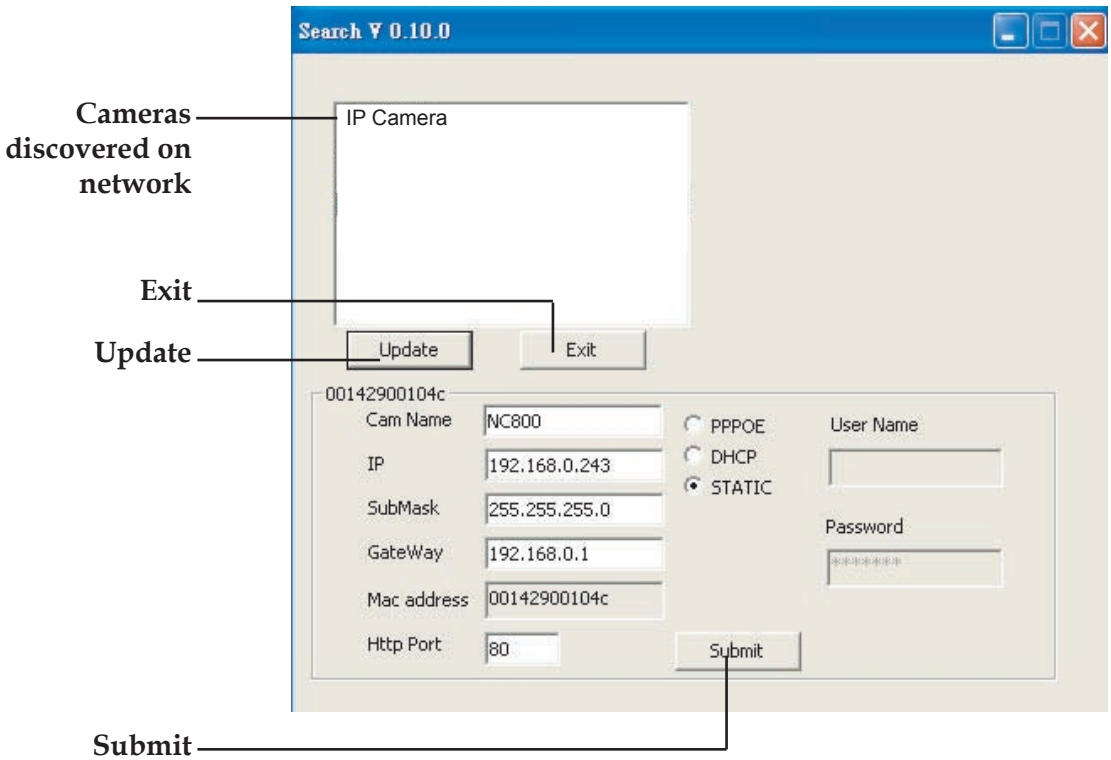
To install an IP address:

1. Connect the IP camera to your network or host PC as described in "Connecting to a network" on page 6.

Note:

Connecting the camera to your network before you have configured an IP address may cause problems such as address conflicts. To avoid these problems, connect the camera to an isolated PC with a hub or cross-over cable to configure the network settings.

2. Start the IP Edit software. The following screen is displayed:



3. Click the **Update** button to scan for your IP camera.
4. When it appears in the window, click the name of your camera to highlight it.
5. Use the radio buttons to determine whether to connect to the camera using DHCP, static IP address, or PPPoE. If you don't know which of these options to select, ask your network administrator for assistance.
6. Fill in all the required fields. Fields that are not required will be greyed-out.
7. Click the **Submit** button to update the camera with the new configuration.

When the above steps have been completed, you can double click the name of the camera in the display window to connect to it using the default browser. Alternatively, you can connect to the camera by entering the IP address in the browser address field.

Using an internet browser to connect to the IP camera

Read this section to learn how to use your Internet browser to connect to the IP camera, view images, and hear audio output. Active X features must be enabled in your browser to use the IP camera. See "Enabling Active X" on page 7.

To connect to the IP camera using an Internet browser:

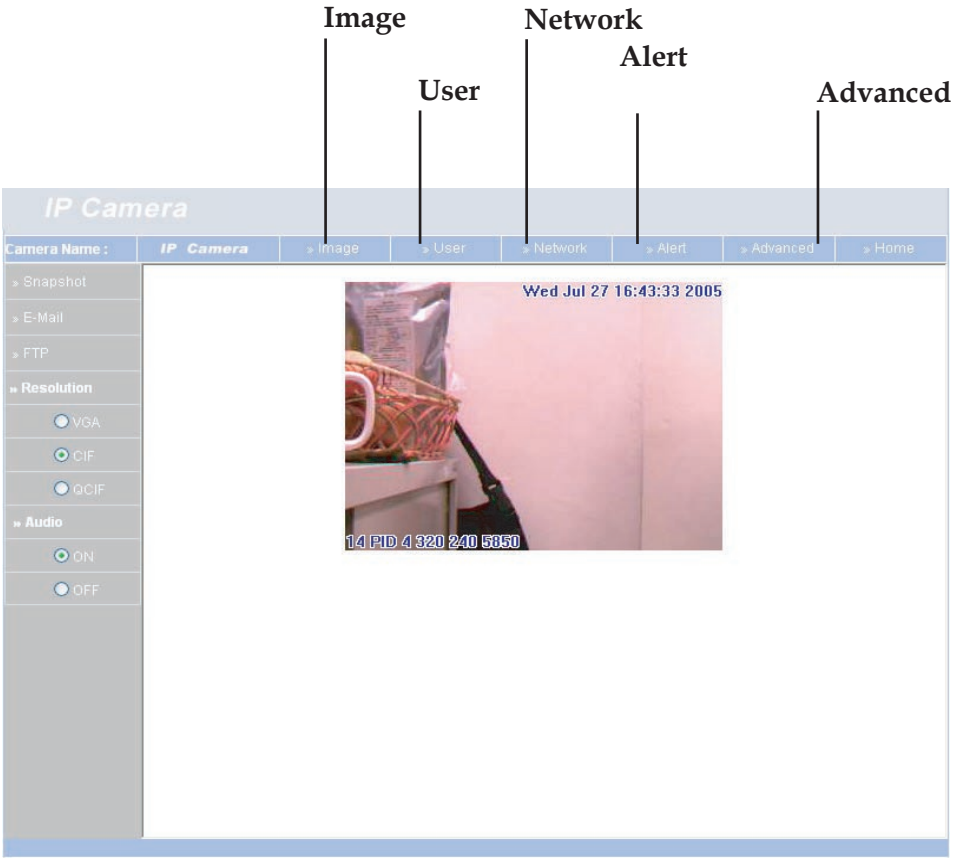
1. Enter the IP address of the camera in the browser address field.

2. When the login screen appears, enter your username and password. The default username is **admin**, the default password is also **admin**.

Using and Configuring

Read this chapter to learn how to operate the IP camera and take advantage of the advanced features such as alerting, and ftp transfers.

Web page layout



Use the menu bar at the top of the screen to access the six submenus:

- Image: To adjust the image
- User: To set up new admin or general users
- Network: To configure network settings
- Alert: To configure alerts
- Advanced: To configure advanced parameters

Resolution and audio settings can be accessed from the side menu panel. Snapshots can also be taken of the screen image and either opened in a browser window, sent as e-mail, or transferred using ftp, using the side menu panel. Each submenu and function is covered in detail in this section of the manual.

Configuring the camera

Read this section of the manual to learn how to configure the IP camera using the web browser interface.

Configuring the image

Use the image submenu to set the image resolution and quality. Using high resolution and quality will result in larger file sizes and therefore higher bandwidth.

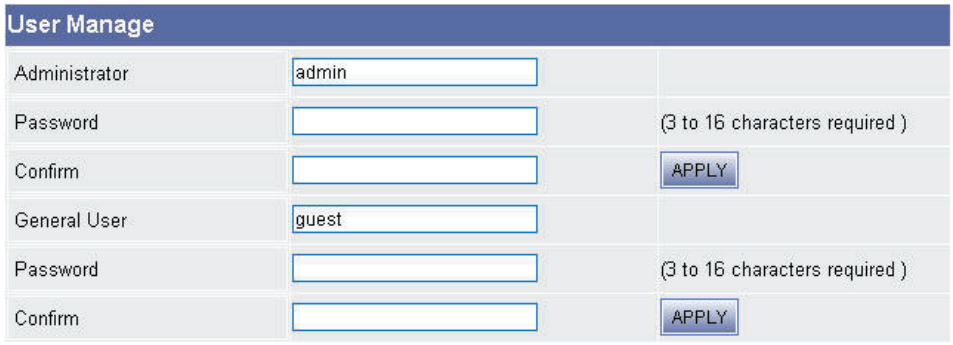
You can also use the Image submenu to set the frequency of the mains power in your area. This is to avoid problems with artificial lighting interfering with the camera.

Use the radio buttons to set a value for resolution, quality and frequency. Click APPLY to confirm your settings.

You can also set the resolution with the radio buttons in the side menu panel.

Setting up users and administrators

The user submenu enables you to set up users and administrators for the camera.



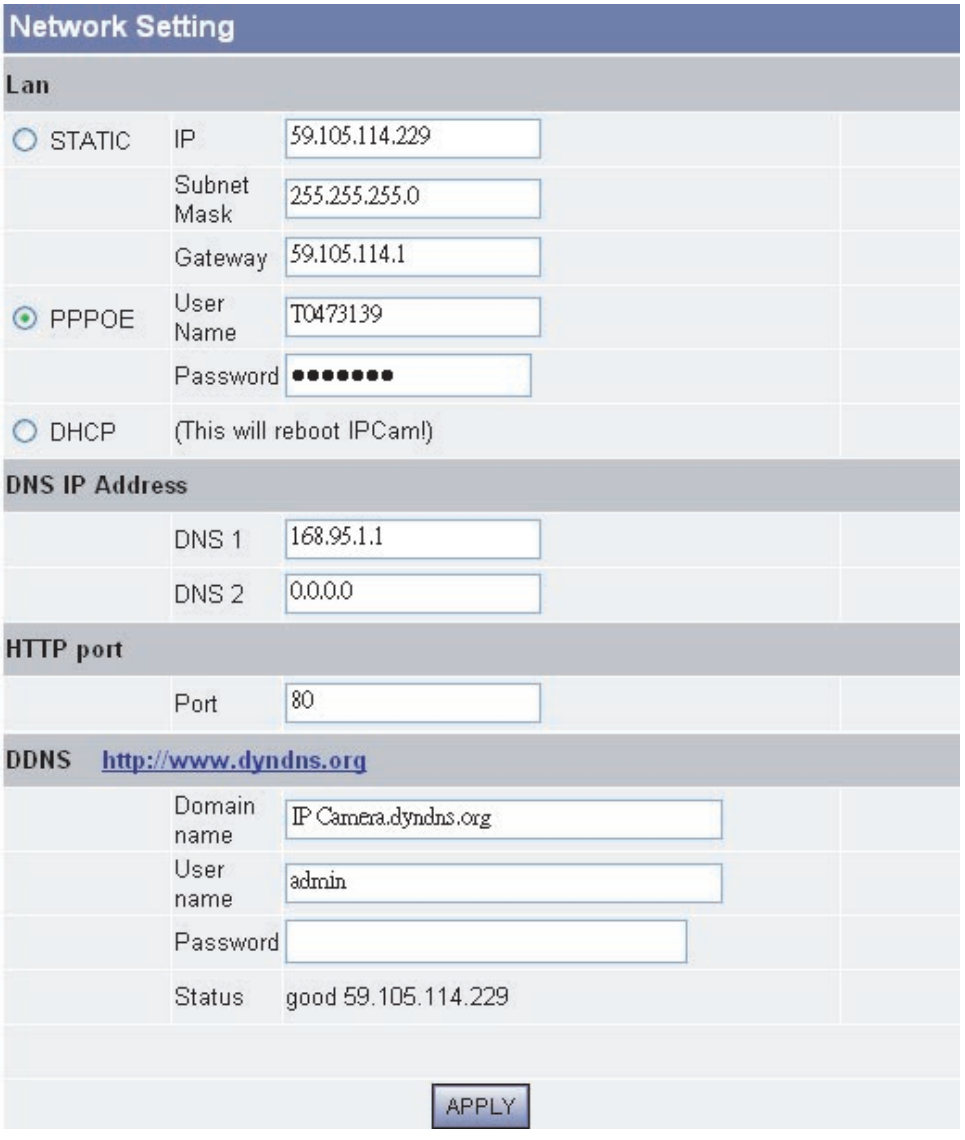
Enter a new username and passwords in the required fields to create new user names. You can only create one admin user. Therefore, if you enter a new administrator user name, the original will no longer work.

You can also only create one general user. General users have no ability to make changes to configuration other than image resolution and quality, and audio output. However, multiple people can sign on with the same username and view the camera at one time.

Click APPLY to confirm your settings.

Configuring network settings

The Network submenu enables you to configure all the network settings for the camera.

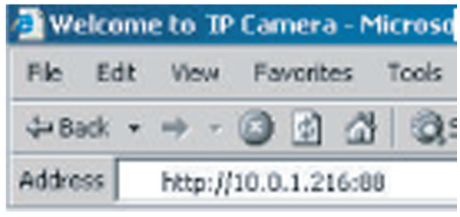


Complete all the fields as required. You may not require all the fields. For instance, you will not need to complete the static IP address fields if you are installing the camera on a network that allocates addresses using DHCP.

Click APPLY to confirm your settings.

HTTP ports

The user can set up to two TCP ports for IP camera web servers. The deafult port number is 80 (the standard web server port) the second port is user defined. If you are not using port 80, you will need to enter the port number after the IP address in the web browser window, to connect to the IP camera. If the camera IP address was 10.0.1.216 and the port number was 88 for instance, you would enter the following in the browser address field to connect to the camera:



DNS 1

Use the same value as PCs on your LAN. Normally, your ISP will provide this address.

DNS 2

This is optional. If entered, this DNS will be used if the DNS1 does not respond.

DNS

Domain name system , internet domain name and IP address mapping service.

DDNS

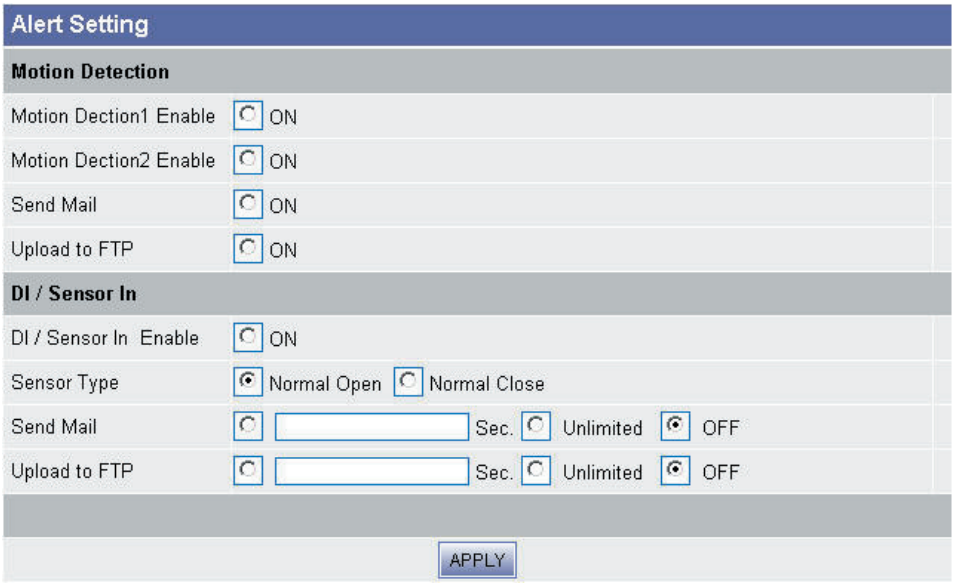
DDNS allows PPPoE or DHCP dynamic IP users to access the IP canmera using a single domain name. The IP camera supports DDNS and meets the Dynamic Net work Services, Inc standard.

Go to **www.dyndns.org** to register a domain name and obtain a username and password. This username and password must be filled in on the network setting page in the DDNS field. See "Configuring Network Settings" on page 13 for details.

When the IP address of the camera changes it will update its new address to DDNS automatically and the camea can be contacted using a domain name instead of an IP address.

Alerts

The alert submenu enables you to define how alerts should be sent when specific events occur. For instance, you may wish to send an e-mail to someone when motion is detected.



Use the radio buttons to select which motion detection setup to enable, and whether to alert by e-mail, or ftp upload. If motion detection is not switched on here, it will not work. Also select whether to enable the optional external DI sensor, how it's triggered, and how to send the alert.

Click APPLY to confirm your settings.

An external DI sensor can be attached to the IP camera to trigger alerts. The external sensor can be normally open, or normally closed. A normally open sensor is like an open switch that closes when triggered. A normally closed sensor is like a closed switch that opens when triggered. This must be set correctly on the alert setting page for an external sensor to function properly.

FTP

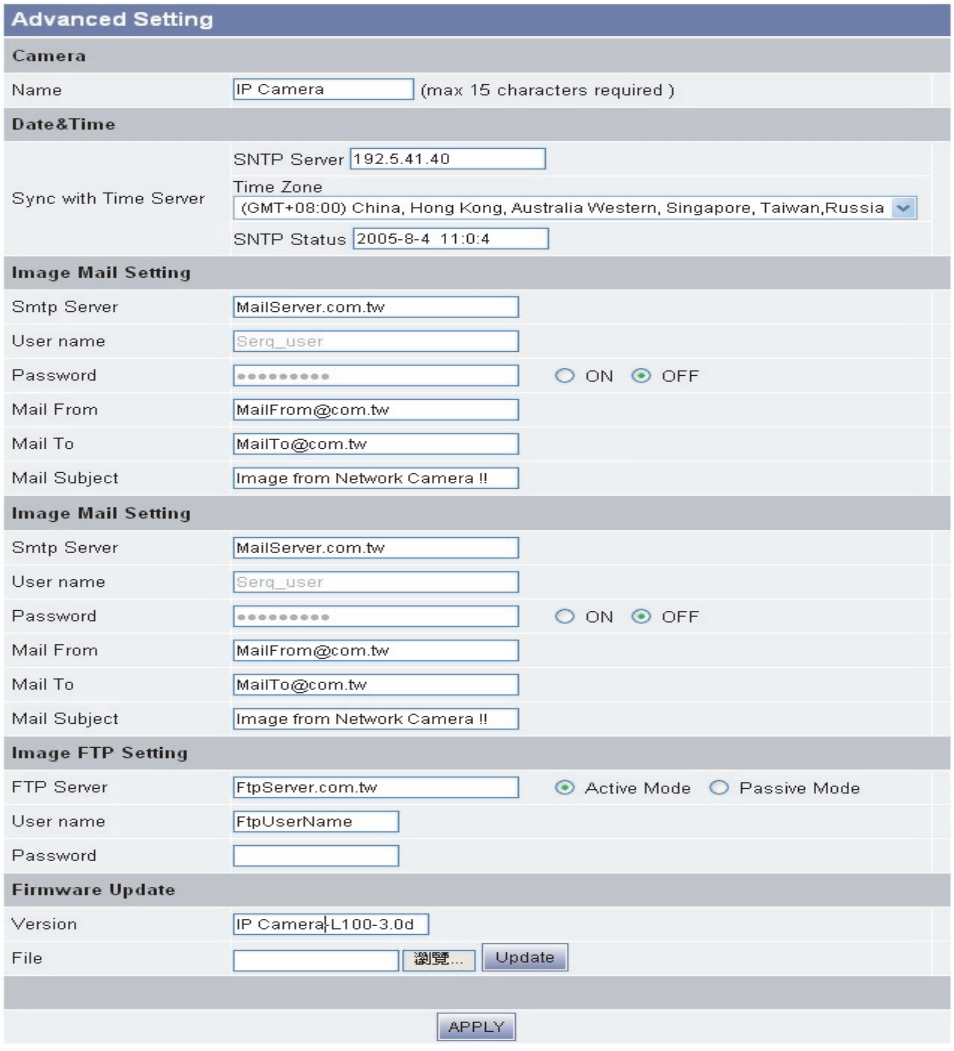
When FTP alerting is enabled, the camera sends a still image every time the alert is triggered to the ftp server specified in the Advanced page, see page 17. The ftp protocol is commonly used to upload to a web page.

Mail

When mail alerting is enabled, the camera sends a still image every time the alert is triggered to the e-mail adress specified on the advanced page, see page 17.

Advanced

Use the Advanced submenu to configure various advanced features of the camera.



You can use the advanced submenu to give the camera a name, set a SNTP (simple network time protocol) clock source, set e-mail parameters for alerts, set ftp parameters, and upgrade firmware.

The settings on this page are critical and should not be changed without careful planning. You may need to consult your network administrator for details about your e-mail server or SNTP address.

You should not attempt to upgrade the firmware of the camera unless you have a new version of firmware, provided by the manufacturer.

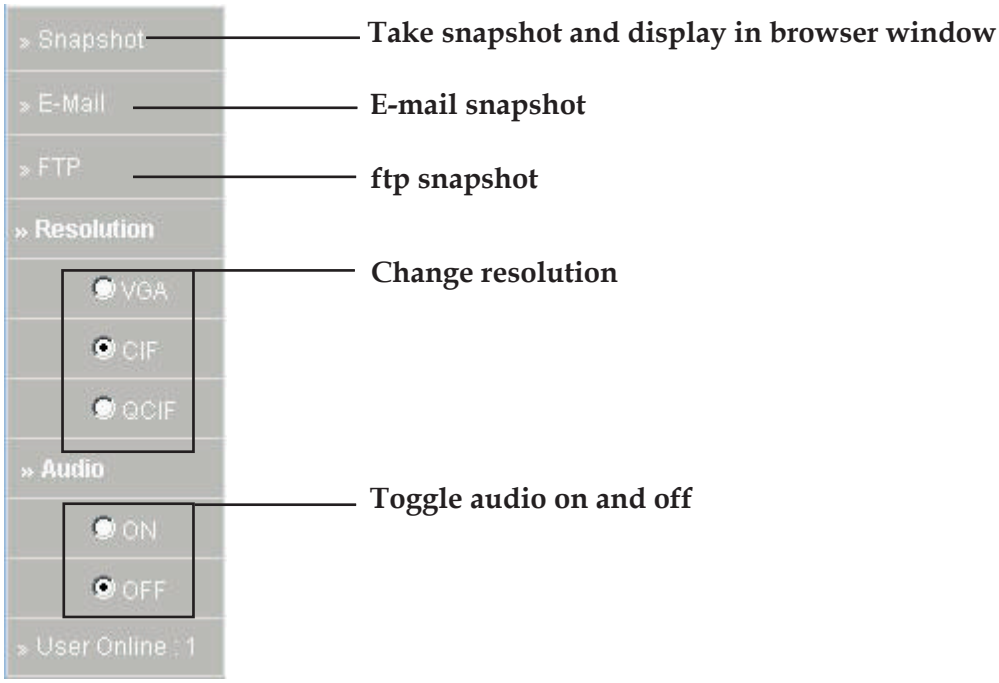
FTP Setting , use your FTP account and server to send still images, select your FTP server type active or passive mode.
Mail Setting, use your email account to send still images

Home

Click » Home at any time to return to the main camera image screen.

The side menu bar

Use the side menu bar to open a camera snapshot in a browser window, upload a snapshot using ftp, or send a snapshot by e-mail.



Click » Snapshot to open a browser window and display the current image.

Click » E-Mail to send an e-mail of the current image to the e-mail recipient defined in the Advanced settings.

Click » FTP to upload the current camera image to the ftp location defined in the Advanced settings.

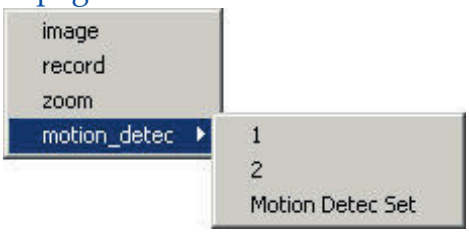
Use the radio buttons to select a frame rate, and click START to begin recording. The file will be saved in AVI format at the location defined in the **Save as** field. Click STOP to end recording.

Zoom

Click zoom to open the zoom function. Use the mouse to drag a square that will be zoom on the screen.

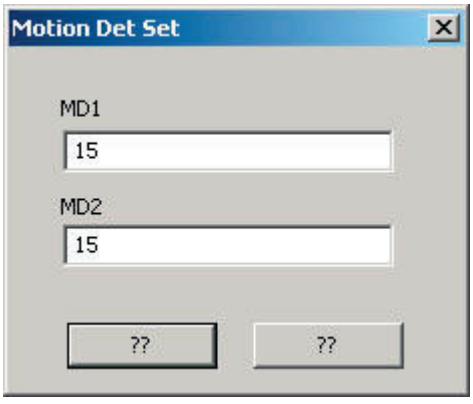
Motion detection

You can also use right click control to set two predefined motion detection areas, and set motion detection levels for each area. Right click on the image to display the drop down menu and select on the Motion detection option with the mouse. Motion detection must be enabled ont the alerts page for motion detection to operate. See page 15.



Click 1 to set motion detection area 1. Use the mouse to draw a square on the screen. Click and hold the left mouse button and drag the square across the area to be monitored. Repeat the procedure to set area 2.

Click **Motion Detect Set** to set a sensitivity level for each area, 15 is most sensitive, 1 is least sensitive.



Enable motion detection on the alerts page, see "Alerts" on page 15 for details.

Appendix

Specifications

• Sensor:	0.25-inch color CMOS 307,200 pixels (VGA) sensor
• Lens:	6 mm, F1.8, board lens
• CPU/encoder:	SOC/JPEG encoder chip
• Video compression:	M-JPEG
• Audio compression:	ADPCM 8 kbps
• Image size (HxV):	640x480 (VGA), 320x240 (CIF), 160x120 (QCIF)
• Frame rate:	Up to 12 fps (VGA), 25fps (CIF)
• Protocol:	TCP/IP, ARP, ICMP, HTTP, SMTP, FTP, DHCP, DNS, DDNS, NTP, PPPoE
• Network:	Ethernet 10Base-TX/10Base-T (RJ-45)
• Status indicators:	Power and LAN LEDs
• External DI:	1 x external interface
• Night vision:	6 x IR LEDs (automatic)
• Management:	2 layer guest/administrator management
• Alert:	Definable alerts by FTP or e-mail
• Snapshot:	Automatic or manual, sent by FTP or e-mail
• Record function:	Manual (AVI Microsoft DirectX8.1, VGA card 32-bit true color
• Clients:	Up to four
• Supported OS:	Microsoft Windows 98/ME/2000/XP/2003
• Supported browsers:	Microsoft Internet Explorer 5.x or later
• EMC/safety:	FCC/CE
• Power:	DC 5V 2A
• Temperature:	Operating 0-50ºC, storage -20ºC-70ºC
• Humidity:	20% - 80%

Maintenance

This product has no user serviceable parts inside and removal of the case should not be attempted except by qualified service personnel.

Only use a clean cloth, slightly dampened with water to clean this camera. Do not use spirit cleaners or solvents as this may damage the plastic case and lens parts. Use a soft, dry cloth to clean the lens when required.

Do not install this camera in an environment where it is likely to be exposed to dust, high humidity, high temperatures, or rain.

Do not install this equipment in an enclosed space with no ventilation. The camera is likely to become warm during normal use and ventilation is required to maintain a sufficiently low operating temperature. If the camera is mounted in an enclosed space, it may overheat and may be permanently damaged.

If the camera begins to function badly or stops working, and routine maintenance procedures described above do not solve the problem, contact your dealer and arrange for a service engineer to inspect the camera.

Glossary

Alert:	An alert can be in the form of an e-mail or an ftp upload of an image, that occurs when a sensor is triggered, or motion is detected.
AVI:	Audio Video Interleaved. A Windows multimedia video format from Microsoft.
CIF:	Common Interface Format. A standard video resolution format used in video conferencing. CIF resolution is 352x288 and bit rate is 36.5 Mbps (at 30 fps)
DHCP:	Dynamic Host Configuration Protocol. A system by which each piece of equipment on a network is allocated an address IP dynamically.
DI sensor:	The DI sensor input allows you to connect an external sensor or switch to the camera that may be used to trigger an alert. The DI sensor input can be set to normally open (switch closing causes an alert) or normally closed (switch opening causes an alert.
Ethernet:	The most widely used local area network (LAN) access method, defined by the IEEE as the 802.3 standard.
FTP:	File Transfer Protocol. A standard protocol designed for transferring files over a TCP/IP network.
IP:	Internet Protocol. The network layer protocol in the TCP/IP communications protocol suite (the "IP" in TCP/IP). IP contains a network address and allows messages to be routed to a different network or subnet.
LED:	Light Emitting Diode. A semiconductor device that emits light when a voltage is applied.
Motion detection:	Camera function that causes an alert to be triggered when movement is detected in the field of view.

PPPoE:	Point to Point Protocol over Ethernet: A standard that incorporates PPP protocol, widely used for dial-up Internet connections, into a cable modem connection that uses Ethernet as its transport to the carrier's facilities.
Protocol:	Standards governing the transmission and reception of data.
QCIF:	Quarter CIF. 176 x 144 resolution, 9.1 Mbps (at 30 fps).
Resolution:	Screen, resolution is expressed as a matrix of dots. For example, the VGA resolution of 640x480 means 640 dots (pixels) across each of the 480 lines.
RJ-45:	Registered Jack 45. RJ-45 type connections are used in Ethernet devices.
SNTP:	Simple Network Time Protocol. A protocol that allows devices to update internal clocks using a standard source available on a network.
Static IP address:	A static IP address that is assigned manually and never changes.
TCP/IP:	Transmission Control Protocol/Internet Protocol. A communications protocol developed under contract from the U.S.
VGA:	Video Graphic Array. The video display standard for the PC.